

### REMARKS

#### § 103 Rejections

Claims 1, 8-10 and 19-22 are rejected under 35 USC § 103(a) as being unpatentable over Morris (US 5792411) in view of Mitwalsky (US 5843363).

Claims 4, 6 and 7 are rejected under 35 USC § 103(a) as being unpatentable over the combination of Morris and Mitwalsky as applied to claim 1 above, and further in view of Nakada (JP 10321126).

Claim 5 is rejected under 35 USC § 103(a) as being unpatentable over the combination of Morris and Mitwalsky as applied to claim 1 above, and further in view of Yang (US 6382254).

The Examiner alleged that, “It would have been obvious to one of ordinary skill in the art to have selected material for the master mold taught by Morris with a ceramic material on a metal layer, as taught by Mitwalsky.”

With reference to the “Summary of the Invention” of Morris et al., this reference relates to a “method of manufacturing a microreplication master tooling suitable for manufacturing replicated articles by machining a **flexible, unitary substrate surface**” . . . (See column 1, lines 65- column 2, line 4)

Column 2, lines 5-10, of Morris et al. recites, “a method of manufacturing a microreplication master tooling suitable for manufacturing replicated articles **by machining a flexible substrate surface with a laser light source** . . .

Column 2, lines 24-29, of Morris et al. recites, “an article which may be used as a replication **master tooling** suitable for replicating microstructured arrays which **includes a flexible substrate** having a plurality of geometric structures extending into the substrate which were formed by a laser light source.”

Further, claim 1 of Morris et al., recites a method of manufacturing a mechanical fastener . . . recites “**providing a flexible, thermoset polymeric tooling substrate having a low energy surface**”.

Since Morris et al. clearly recites a master tooling comprised of a “flexible substrate” and a “flexible, unitary substrate”, there is no motivation to replace the substrate of the master mold of Morris et al. with a (i.e. non-unitary) multi-layered structure, as described by Mitalsky. One of ordinary skill in the art appreciates that a substrate having a ceramic material on a metal layer is clearly a rigid, inflexible substrate, clearly in contrary to the teachings of Morris et al.

Further, as explained in the “Background” of Morris et al. “Some microreplication applications require *optical* quality surfaces, which necessitates the use of costly production devices. However, there is a growing number of applications which do not require *optical* quality tooling **since a precisely manufactured article surface is not required.**” (See column 1, lines 47-51)

Column 3, lines 49-50 of Morris et al. states that, “The invention relates to replication tooling articles which are used to replicate *non-optical* quality structured surfaces.”

In contrast, the master mold of the present invention, such as the mold suitable for making plasma display panel ribs, as recited by dependent claim 4, or the mold suitable for making microfluidic articles (e.g. wherein the volume of the cavity controls the volume of fluid provided therein) as recited by dependent claim 5, require a precisely manufactured surface.

New dependent claims 23 and 24 have been added to clarify this distinction reciting that the mold is “**suitable for duplicating a fine structure with high precision**”. These claims are supported by the specification, such as at p. 14, lines 1-7.

Withdrawal of the rejections and a timely allowance are respectfully requested.

Respectfully submitted,

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